Proposed Maneuvers Required to Fly Helicopters
From the Designated Main Runway Pilot Position

These maneuvers have been taken from the International Radio Controlled Helicopter Association (IRCHA) Pilot Proficiency Program (PPP). They represent what I think are maneuvers required for safe flight from the main runway area as discussed at the November meeting.   It is not my intent to adopt the IRCHA PPP in its entirety, but to use portions of this well accepted, standardized program to provide guidelines for the safe operation of helicopters at our field.

A description of some of the maneuvers from IRCHA PPP Level I and Level II is attached. These descriptions are very thorough. IRCHA requires that some maneuvers be performed symmetrically on either side of the pilot to gain credit for the maneuver. I believe that this is an excellent way to gauge pilot proficiency, but is excessive for our simple goal of safety at the field. I think that our policy should be for the pilot to safely perform the required maneuvers only in the orientation required to conform to the active traffic pattern. This will allow the helicopter pilot to fly from the main runway on days when he/she can safely conform to the flow of traffic operating off of the runway and limit them to the Hover Pad on days when their skill level in the required maneuvers is less than proficient. Also, the landing target size should be increased to include the entire runway in front of the pilot.

An example would be a day with left to right wind and a general traffic pattern direction of right to left over the runway for takeoffs and landings. If a helicopter pilot is proficient in lateral view hover with nose left, and transition into and out of forward flight in the direction of right to left, then they should be allowed to fly from the runway. Conversely, if the helicopter pilot is only proficient in lateral view hover with nose right, they would be limited to the Hover Pad as approaches from left to right would disrupt the flow of traffic.

A list of the required maneuvers are as follows:

Take-Off
Stationary Hover
Hovering Laterally
Full Lateral View Hovering
Diagonal Hovering
Taxi Out
Climb Out
90/180 Degree Turns
Straight and Level Flight
Traffic Pattern Approach to Landing
Landing

Take-off
> The take-off should be performed straight up from the landing area, at a constant rate of climb, with little lateral deviations. Come to a complete stop without any vertical bounce or dip, and little to no lateral wobble or drifting. The landing area is defined as a 36"/(1meter) diameter circle.

Stationary Hover
> 1. After the take-off, coming to a complete stop with little to no vertical bounce, dip, lateral drifting, or wobble.
> 2. Hold in the Stationary Hover for one (1) minute.
> 3. The Stationary Hover should give the appearance of being under total control.

Hover Laterally
> 1. From take-off area hover forward ten (10) feet, hold for ten (10) seconds.
> 2. From there hover backward twenty (20) feet, hold for ten (10) seconds.
> 3. From there hover forward ten (10) feet until you are over the landing area, then hover to the left ten (10) feet, hold for ten (10) seconds.
> 4. From there hover to the right twenty (20) feet, hold for ten (10) seconds.
> 5. From there hover back to the left ten (10) feet until you are over the landing area.
> 6. Land with the skids completely within the landing area.

Full Lateral View Hovering
> 1. Take-off to Hover, Hold for five (5) seconds.
> 2. Rotate the nose of the Helicopter either left or right ninety (90) degrees, hold for five (5) seconds.
> 3. Rotate the nose of the Helicopter back to straight ahead, hold for five (5) seconds.
> 4. Continue rotating the nose of the helicopter ninety (90) degrees to the other side, hold for five (5) seconds.
> 5. Rotate the nose back to straight ahead, hold for five (5) seconds.
> 6. Land with the skids completely within the landing area.

Diagonal Hovering
> 1. After take-off from the landing area within center of a 10 meter/yard box, from Stationary Hover, maintaining a constant heading, move the helicopter diagonally to a corner of the box, hold for five (5) seconds, then return to the center of the box.
> 2. Repeat with the remaining 3 corners of the box.
> 3. Land with the skids completely within the landing area.

Taxi Out
> 1. Take-off from the landing area to an eye-level hover; hold momentarily.
> 2. Hover forward slowly for no less than ten (10) meters.

3. Turn into the prevailing wind direction and continue straight and level for no less than ten (10) meters.
4. Either proceed to Climb-Out or Land within the landing area circle.

Climb-Out
1. After Taxi Out, begin ascent by gradually increasing power/collective.
2. Continue to climb until an altitude of approximately fifty (50) feet.
3. Climb out should be parallel to flight path and at a moderate speed.

90 Degree Turns
1. After climb out, turn 90 degrees in a direction away from pilot and spectators.

180 Degree Turns
1. While flying straight and level, execute a turn hold this turn until the helicopter has come around back to the same direction it has just come from, straighten out and continue in straight and level flight.
2. Turns should be made turning away from the pilot to the right and left.
3. Turns should be made turning toward the pilot to the right and left.

Straight and Level Flight
1. Fly from the Left to the Right.
2. Fly from the Right to the Left.

Traffic Pattern Approach to Landing
1. From straight and level flight, after the helicopter passes the pilot execute a 180 degree turn away from the pilot.
2. Start to reduce speed and power.
3. After the helicopter passes the pilot execute a 180 degree turn towards; continue to reduce power/collective so as to descend at a gradual angle to the landing zone.
4. This must be done starting from both the right and the left.

Landing
1. This landing is to be completed as part of a Translational Descent, but this has the added requirement that both the take off and landing must be within a one (1) meter circle. The skids must be completely within the landing circle.
2. This must be done starting from both the right and the left.

If you have any comments please let me know.

Scott